

Juncaceae, a new family record for Malaya

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AMONG SOME unidentified sedges from the Malay Peninsula kindly sent to me for identification, I found two sheets of *Juncus prismatocarpus* R.BR., collected by H. M. BURKILL in the Cameron Highlands. It seems worthwhile to mention these collections in a short note, as up to the present Juncaceae were unknown from the Malay Peninsula.

Juncus prismatocarpus extends from Ceylon through S.E. Asia to Japan and Kamtchatka, and southward to Australia, Tasmania, and New Zealand. In Malaysia it is known from N. Sumatra, West and Central Java, the Philippines, and New Guinea (see BACKER in *Flora Mal. I*, 4: 213. 1951).

MALAY PENINSULA. Pahang: Cameron Highlands; summit of Batu Brinchang, open rough waste, 6,660 ft. Sept. 1, 1956, H. M. BURKILL 783 (L); Break Pressure Tank Hill, open waste land, 4,900 ft. Sept. 5, 1956, H. M. BURKILL 823 (L).

The habitat of *J. prismatocarpus* is in Malaysia in the mountains, between 3,000 and 9,000 feet above sea-level, along pools, on marshy plains, along swampy banks of brooks and rivulets, but occasionally on drier heath lands, always in *open* places.

The anthropogenous habitat in the Cameron Highlands might cast some doubt about its being native in the Malayan uplands, where it now occurs as a ruderal. The fact that it has never been found before in Malaya and this new habitat would at first glance point to a new, rather recent introduction.

If the species was introduced it is most likely that it is due to man who, after the rather recent opening of the Cameron Highlands, the building of bungalows, etc., has frequented this pleasant resort. The tiny, oblong ribbed seeds measuring only $\frac{1}{2}$ – $\frac{3}{4}$ mm. in length may easily have been brought along with luggage or, more possibly, have adhered to shoes or clothes of people who have formerly either paid a visit to mountain resorts in Ceylon, India, Burma, North Sumatra or Java. One could imagine for example visits of botanists, tea-planters, or tourists. How long the seed will retain its viability under these circumstances is unknown.

Another explanation is more likely, however, namely that it is native and was hitherto overlooked because of its scarcity due to

the paucity of its ecological niche. Open somewhat marshy localities must have been extremely scarce before the opening of Cameron Highlands. Once the opening of the highlands started, man greatly extended the area of its potential occurrence.

A similar swarming out of native mountain plants of restricted occurrence over newly opened land occupied by man has been described by Dr. VAN STEENIS)* from various mountains in Java in which several native species invaded plantations as weeds in large quantity or acted as roadside ruderals. A similar behaviour has been observed in the European Alps and THELLUNG has called such plants on new, anthropogenous habitat, apophytes)†.

Juncus prismatocarpus may in Malaya well belong to this class and may originally have occurred very locally in the Camerons from which focus it has spread to the newly opened land, thereby greatly increasing in number. It is quite possible that other ecologically heliophytic plants may 'escape' from their small, precarious niches in the densely forested hills and show their existence in this unexpected way.

* Bull. Jard. Bot. Btzg III, 13 (1935) 303.

† Bot. Jahrb. 53 (1915) Beibl. 116, p. 38 footnote.